WHAT IS CLAIMED IS:

1. A pump module comprising:

a fuel pump having a center axis of an outer circumference;

a fuel filter including a filter casing and a filter element, the filter casing having an outer circumference;

a fuel outlet disposed outside the outer circumference of the filter casing; and

a pressure regulator for regulating pressure of fuel discharged from the fuel pump through the fuel filter,

wherein the filter casing covers at least a part of the outer circumference of the fuel pump,

wherein the filter element is accommodated in the filter casing, and eliminates contaminants in the fuel discharged from the fuel pump,

wherein the fuel outlet includes an outflow passage for flowing the fuel from a discharge opening of the filter casing,

wherein the pressure regulator is disposed outside the outer circumference of the filter casing,

wherein the discharge opening is disposed on a sidewall of the outer circumference of the filter casing,

wherein the outflow passage includes a retrieve passage extending from the discharge opening to the outer circumference of the filter casing, and

wherein the pressure regulator includes a regulator inlet for introducing the fuel, the regulator inlet being opened to the retrieve passage.

2. The pump module according to claim 1,

wherein the outflow passage includes an outlet passage being bent from the retrieve passage and being parallel to the center axis of the fuel pump, and

wherein at least a part of the pressure regulator is disposed between an outlet portion of the fuel outlet having the outlet passage and the sidewall of the outer circumference of the filter casing.

3. The pump module according to claim 2,

wherein the pressure regulator is entirely disposed between the outlet portion of the fuel outlet and the sidewall of the outer circumference of the filter casing.

4. The pump module according to claim 1,

wherein the pressure regulator discharges the excess fuel to an upper side of the pressure regulator when the pump module is mounted on a fuel tank for accumulating the fuel, and

wherein the fuel pump sucks the accumulated fuel.

5. The pump module according to claim 1,

wherein the pressure regulator is disposed on a sidewall of the outer circumference of the filter casing.

6. A pump module comprising:

a fuel pump having a center axis of an outer circumference;

a fuel filter including a filter casing and a filter element,

the filter casing having an outer circumference;

a pressure regulator for regulating pressure of fuel discharged from the fuel pump through the fuel filter; and

a check valve for preventing the fuel from flowing back to the fuel pump, the fuel being discharged from the fuel pump,

wherein the fuel pump includes a discharge portion having an inner circumference for discharging the fuel,

wherein the filter casing covers at least a part of the outer circumference of the fuel pump,

wherein the filter element is accommodated in the filter casing, and eliminates contaminants in the fuel discharged from the fuel pump,

wherein the fuel filter includes a fuel inlet, which is engaged to the side of the inner circumference of the discharge portion in the center axial direction of the fuel pump, and

wherein the check valve is accommodated in the fuel inlet of the fuel filter.

7. The pump module according to claim 6,

wherein the fuel inlet, the discharge portion, and the check valve overlap each other in a range of the center axial direction.

8. The pump module according to claim 6,

wherein the pressure regulator is disposed outside the outer circumference of the filter casing.

9. The pump module according to claim 8,

wherein the pressure regulator is disposed on a sidewall of the outer circumference of the filter casing.

10. The pump module according to claim 8,

wherein the filter casing includes an discharge opening disposed on the sidewall of the outer circumference of the filter casing, and

wherein the fuel flows from the filter element through the discharge opening.

11. The pump module according to claim 1,

wherein the filter casing includes a body and a cover,

wherein the body is integrally made of resin, has an opening, and accommodates the filter element,

wherein the cover covers the opening of the body,

wherein the fuel filter includes a fuel outlet having an outlet passage and a through hole,

wherein the fuel outlet connects to the discharge opening of the filter casing, and is made of resin and integrated with the body,

wherein the through hole penetrates through the fuel outlet, and

wherein the pressure regulator is inserted in the through hole of the fuel outlet so that the pressure regulator covers one open end of the through hole, the pressure regulator discharges an excess fuel from the other open end of the through hole, and the pressure regulator includes an inlet passage connecting to the outlet passage of the fuel filter.

12. The pump module according to claim 1,

wherein the filter casing includes a body for accommodating the filter element and a cover for covering an opening of the body, the body being integrally made of resin.

13. The pump module according to claim 1,

wherein a part of the pressure regulator is disposed in a projection region of the filter casing, the projection region being provided by projecting the filter casing in the center axial direction of the fuel pump.

14. The pump module according to claim 1,

wherein the filter casing covers entirely the outer circumference of the fuel pump.

15. The pump module according to claim 1,

wherein a length of the filter casing in the center axial direction of the fuel pump is substantially equal to a length of the fuel pump in the center axial direction.

16. The pump module according to claim 15,

wherein a length of the filter element in the center axial direction is substantially equal to a length of the fuel pump in the center axial direction.

17. The pump module according to claim 1,

wherein the discharge portion of the fuel pump is disposed

on the center axis of the fuel pump.

18. The pump module according to claim 1,

wherein a flow direction of the excess fuel flowing from the filter casing into the pressure regulator is the same as a fuel direction of the excess fuel being discharged from the pressure regulator.

19. The pump module according to claim 1,

wherein a flow direction of the excess fuel flowing from the filter casing into the pressure regulator is different from a flow direction of the excess fuel being discharged from the pressure regulator.

20. The pump module according to claim 1,

wherein the filter casing includes an inner cylinder having inner and outer circumferences and an outer cylinder disposed outside the outer circumference of the inner cylinder,

wherein the filter casing accommodates the filter element between the inner and outer cylinders,

wherein the inner cylinder covers entirely the outer circumference of the fuel pump,

wherein an upper periphery of the fuel pump and a sidewall of the inner circumference of the inner cylinder provide an upper concavity when the pump module is mounted,

wherein the pump module further includes a drain passage for draining water from upside to downside between the fuel pump and

the inner cylinder, the drain passage having at least one passage and being disposed between the sidewall of the outer circumference of the fuel pump and the sidewall of the inner circumference of the inner cylinder, and

wherein the sidewall of the outer circumference of the fuel pump and the sidewall of the inner circumference of the inner cylinder are adhered together or have a clearance therebetween, the clearance preventing water from dropping therethrough.

21. The pump module according to claim 1,

wherein the fuel pump includes a discharge portion for discharging the fuel, the discharge portion being disposed on one end of the fuel pump in the center axial direction,

wherein the filter casing includes an inner cylinder having an outer circumference, an outer cylinder disposed outside the outer circumference of the inner cylinder, and an accommodation chamber for accommodating the filter element,

wherein the accommodation chamber is disposed between the inner and outer cylinders, and has a ring-shape cross-section,

wherein the inner cylinder covers the outer circumference of the fuel pump,

wherein the fuel pump includes an electric receiving terminal for being electrically connectable to a power supply terminal disposed on one end of a power supply cable, which supplies an electric power to the fuel pump, the electric receiving terminal being disposed on one end of the discharge portion,

wherein the filter casing further includes a covert for

covering the one end of the discharge portion of the fuel pump, the covert contacting each open periphery of the inner and outer cylinders,

wherein the covert includes a fuel passage and a power supply passage,

wherein the fuel passage connects to both the discharge portion and the accommodation chamber, and flows the fuel from the discharge portion to the accommodation chamber, the fuel being discharged from the fuel pump,

wherein a connection portion between the fuel passage and the discharge portion is sealed,

wherein the power supply passage does not connect to the fuel passage and is disposed on the periphery of the power supply terminal of the power supply cable, and

wherein the power supply terminal is exposed.

22. The pump module according to claim 1,

wherein the fuel pump includes a metallic pump housing,

wherein the filter casing covers entirely the sidewall of the outer circumference of the pump housing, has a cylindrical shape, includes an inner cylinder disposed on the fuel pump side and an outer cylinder disposed outside the outer circumference of the inner cylinder, and is made of non-conductive resin, and

wherein a distance between the inner cylinder and the pump housing is smaller than a predetermined distance.

23. The pump module according to claim 1,

wherein the length of the pressure regulator in the center axial direction of the fuel pump is longer than a distance between a bottom surface of the filter casing and an inner bottom surface of a fuel tank, when the pump module is mounted on the fuel tank for accumulating the fuel, and

wherein the fuel pump sucks the accumulated fuel.

24. The pump module according to claim 1,

wherein the pump module is mounted on a fuel tank for accumulating the fuel,

wherein the fuel pump sucks the accumulated fuel, and

wherein the center axis of the fuel pump is parallel to a vertical direction.

25. A pump module comprising:

a fuel pump having a center axis of an outer circumference;

a fuel filter including a filter casing and a filter element, the filter casing having an outer circumference; and

a pressure regulator for regulating pressure of fuel discharged from the fuel pump through the fuel filter,

wherein the filter casing covers at least a part of the outer circumference of the fuel pump,

wherein the filter element is accommodated in the filter casing, and eliminates contaminants in the fuel discharged from the fuel pump,

wherein the pressure regulator is disposed outside the outer circumference of the filter casing, and

wherein a part of the pressure regulator is disposed in a projection region of the filter casing, the projection region being provided by projecting the filter casing in the center axial direction of the fuel pump.

26. A pump module comprising:

a fuel pump having a center axis of an outer circumference;

a fuel filter including a filter casing and a filter element, the filter casing having an outer circumference; and

a pressure regulator for regulating pressure of fuel discharged from the fuel pump through the fuel filter,

wherein the filter casing covers at least a part of the outer circumference of the fuel pump,

wherein the filter element is accommodated in the filter casing, and eliminates contaminants in the fuel discharged from the fuel pump,

wherein the pressure regulator is disposed outside the outer circumference of the filter casing,

wherein the length of the pressure regulator in the center axial direction of the fuel pump is longer than a distance between a bottom surface of the filter casing and an inner bottom surface of a fuel tank, when the pump module is mounted on the fuel tank for accumulating the fuel, and

wherein the fuel pump sucks the accumulated fuel.

27. A pump module comprising:

a fuel pump having a center axis of an outer circumference;

a fuel filter including a filter casing and a filter element, the filter casing having an outer circumference; and

a pressure regulator for regulating pressure of fuel discharged from the fuel pump through the fuel filter,

wherein the filter casing covers at least a part of the outer circumference of the fuel pump, and is disposed around the center axis of the fuel pump,

wherein the filter element is accommodated in the filter casing, and eliminates contaminants in the fuel discharged from the fuel pump, and

wherein the pressure regulator is disposed outside the outer circumference of the filter casing.

28. The pump module according to claim 27,

wherein the pressure regulator is disposed on a sidewall of the outer circumference of the filter casing.

29. A pump module comprising:

a fuel pump having a center axis of an outer circumference;

a fuel filter including a filter casing and a filter element, the filter casing having an outer circumference;

a suction filter disposed on one end of the fuel pump in a center axial direction of the fuel pump, for eliminating contaminants in fuel sucked by the fuel pump; and

a pressure regulator disposed on one end of the fuel filter in the center axial direction, for regulating pressure of the fuel discharged from the fuel pump through the fuel filter,

wherein the filter casing covers at least a part of the outer circumference of the fuel pump, and is disposed around the center axis of the fuel pump,

wherein the filter element is accommodated in the filter casing, and eliminates contaminants in the fuel discharged from the fuel pump, and

wherein the pressure regulator and the suction filter overlap each other in a range of the center axial direction.

30. The pump module according to claim 29,

wherein the suction filter has an outer circumference with a concavity, which caves toward a center of the fuel pump, and

wherein a part of the pressure regulator is disposed in the concavity.

31. The pump module according to claim 29,

wherein the fuel pump and the suction filter are almost disposed on a same axis.

32. The pump module according to claim 29, further comprising:

a check valve for preventing the fuel from flowing back to the fuel pump, the fuel being discharged from the fuel pump,

wherein the fuel pump includes a discharge portion having an inner circumference,

wherein the fuel filter includes a fuel inlet, which is engaged to the inner circumference of the discharge portion in the center

axial direction, and

wherein the check valve is accommodated in the fuel inlet.

33. The pump module according to claim 32,

wherein the fuel inlet, the discharge portion, and the check valve overlap each other in the range of the center axial direction.

34. The pump module according to claim 29,

wherein the pressure regulator is disposed outside the outer circumference of the filter casing.

35. The pump module according to claim 34,

wherein the pressure regulator is disposed on a sidewall of the outer circumference of the filter casing.

36. The pump module according to claim 34,

wherein a part of the pressure regulator is disposed in a projection region of the filter casing, the projection region being provided by projecting the filter casing in the center axial direction.

37. The pump module according to claim 34,

wherein the filter casing includes an discharge opening disposed on a sidewall of the outer circumference of the filter casing, and

wherein the fuel flows from the filter element through the discharge opening.

38. The pump module according to claim 37,

wherein the filter casing includes a body and a cover,

wherein the body is integrally made of resin, has an opening, and accommodates the filter element,

wherein the cover covers the opening of the body,

wherein the fuel filter includes a fuel outlet having an outlet passage and a through hole,

wherein the fuel outlet connects to the discharge opening of the filter casing, and is made of resin and integrated with the body,

wherein the through hole penetrates through the fuel outlet, and

wherein the pressure regulator is inserted in the through hole of the fuel outlet so that the pressure regulator covers one open end of the through hole, the pressure regulator discharges an excess fuel from the other open end of the through hole, and the pressure regulator includes an inlet passage connecting to the outlet passage of the fuel filter.

39. The pump module according to claim 29,

wherein the filter casing includes a body for accommodating the filter element and a cover for covering an opening of the body, the body being integrally made of resin.

40. The pump module according to claim 29,

wherein the filter casing covers entirely the outer circumference of the fuel pump.

41. The pump module according to claim 29,

wherein a length of the filter casing in the center axial direction is substantially equal to a length of the fuel pump in the center axial direction.

42. The pump module according to claim 41,

wherein a length of the filter element in the center axial direction is substantially equal to a length of the fuel pump in the center axial direction.

43. The pump module according to claim 29,

wherein the discharge portion of the fuel pump is disposed on the center axis of the fuel pump.

44. The pump module according to claim 29,

wherein a flow direction of the fuel flowing from the filter casing into the pressure regulator is the same direction as a flow direction of the excess fuel being discharged from the pressure regulator.

45. The pump module according to claim 29,

wherein a flow direction of the fuel flowing from the filter casing into the pressure regulator is different from a flow direction of the excess fuel being discharged from the pressure regulator.

46. The pump module according to claim 34,

wherein the length of the pressure regulator in the center

axial direction is longer than a distance between a bottom surface of the filter casing and an inner bottom surface of a fuel tank, when the pump module is mounted on the fuel tank for accumulating the fuel, and

wherein the fuel pump sucks the accumulated fuel.

47. The pump module according to claim 29,

wherein the pump module is mounted on a fuel tank for accumulating the fuel,

wherein the fuel pump sucks the accumulated fuel, and

wherein the center axis of the fuel pump is parallel to a vertical direction.